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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/991,079

11/16/2001

Valery Tsourikov

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08/31/2009

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EXAMINER

SPOONER, LAMONT M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/991,079	Applicant(s) TSOURIKOV ET AL.	
	Examiner LAMONT M. SPOONER	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/30/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. This office action is in response to applicant's claims filed 5/28/09. Claims 1-20 are currently pending and have been examined.

Response to Arguments

2. Applicant's arguments, see remarks, filed 5/28/09, with respect to the rejection(s) of claim(s) 1-20 under 35 USC 103 have been fully considered and are persuasive. However, based upon further consideration, a new ground(s) of rejection is made in view of Tsourikov et al. (US 6,167,370).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsourikov et al. (US 6,167,370).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As per **claims 1 and 12**, Tsourikov teaches a system (Fig. 1 item 10-as his system) enabling a user to ask a question (query) and for providing the user with one or more answers or solutions to such question, the system comprising:

a knowledge base comprising a set of answers having the form S-A-O (Fig. 3 item 18-his DB of SAO structures, displayable to user), and further comprising links to documents corresponding to the set of answers (C.6 lines 45-51-his link to full sentences/documents corresponding to the answer);

a problem statement generator configured to receive a natural language query from a user apparatus (C.5 lines 60-67-his user natural language request) and to automatically generate a problem statement in

the form A- O, S-A, S-X-0 or S, where S, A and O are query elements in the natural language query, where X indicates absence of a query element (C.5 line 60-C.6 line 22-his user input and generation of s-a-o query structure based on his search of candidate documents);

a server coupled to the knowledge base, the server configured to (Fig. 2, his web to system, item 10, his local DB as the knowledge base) search the knowledge base using the problem statement to find at least one S-A-O answer, wherein the A and 0, or S and A, or S and 0 or S query elements in the problem statement are also in the at least one S-A-O answer (Fig. 3 item 20-his comparison of SAO of user request/query and SAO of candidate documents); and

a communication device configured to transmit the at least one answer S-A-O and associated active document links to the user apparatus (C.6 lines 37-51-his relevant document stored for display "as user desires" and page number linking to full sentences/documents corresponding to the answer as his active link, see also Fig. 3 his "displaying to user", and displaying the reference to the user if marked relevant, therefore, an inherent link to the document wherein the user is able to reach the relevant document, by the systems provided information).

As per **claims 2 and 13**, Tsourikov teaches a system as set forth in claim 1. Tsourikov further teaches wherein said server is configured to conduct a search a search of the World Wide Web, (C.6 lines 23-37-his web search) identify documents that include new answer S-A-O's each comprising query elements in the problem statement, (Fig. 2 his "web" data search for documents, C.6 lines 23-37-for S-A-O's) store links to such documents, (C.6 lines 45-51-his page number linking to full sentences/documents corresponding to the answer as his active link, see also Fig. 3 his "displaying to user", and displaying the reference to the user if marked relevant) and add such new answer S-A-O's to the knowledge base (C.6 lines 23-44-all new S-A-O's are added/stored in S-A-O DB).

As per **claims 3 and 14**, Tsourikov teaches claim 2, and further teaches wherein said server is also configured to conduct said search automatically in response to the server determining that no answer S-A-O's exist in the knowledge base comprising the query elements in the problem statement (C.5 lines 20-27-his all candidates in sequence searched and not S-A-O found, and C.6 lines 23-27-his sequence of local databases, to Web search, as his automatic search process).

As per **claims 4 and 15**, Tsourikov teaches claim 2, and further teaches wherein said server is programmed to prompt the user for a command to initiate the search of the World Wide Web (C.6 lines 23-27-his “or” Web, wherein, there is an inherent selection option, based upon the choice of searching the web).

As per **claims 5 and 16**, Tsourikov teaches claim 1, and further teaches wherein user apparatus converts human voice signals into said problem statement (C.5 line 60-C.6 line 22-his conversion to S-A-O structure as the problem statement, and see Newman, 5,774,833, properly incorporated by reference, C.5 lines 50-51-his microphone input as applied to the input converted to problem statement).

As per **claims 6, 7, 9, 10 and 17-19**, Tsourikov further teaches wherein user apparatus converts the at least one answer S-A-O into audio signals, (C.5 line 60-C.6 line 22-his conversion to S-A-O structure as the problem statement, and see Newman, 5,774,833, properly incorporated by reference, C.5 lines 47-51-his microphone/loudspeaker input as applied to the input/output converted to problem statement), including voice-to-text and text-to-voice recognition capability and a client software module including

the problem statement generator (ibid, inherent to microphone/loudspeaker input/output and text processing).

As per **claim 8**, Tsourikov teaches a system as set forth in claim 1. Tsourikov further teaches wherein said user apparatus includes a user digital computer for generating said problem statement and receiving said at least one answer S-A-O (Fig. 1, item 12, as applied to claim 1).

As per **claim 11**, Tsourikov teaches system as set forth in claim 1, wherein each of the at least one answer S-A-Os is represented in a sentence format (C.6 lines 45-51-his output sentence including SAO).

As per **claim 20**, Tsourikov teaches a method of providing one or more solutions in response to a user query, the method comprising:

providing a knowledge base of semantically and automatically processed information including a set of answers in the form of S-A-O's (subject-action-object), and further comprising active links to documents corresponding to the set of answers (Fig. 3 item 18-his DB of SAO structures, displayable to user, C.6 lines 37-51-his relevant document stored for display "as user desires" and page number linking to full sentences/documents corresponding to the answer as his active link, see also Fig. 3 his "displaying to user", and displaying the reference to the user

if marked relevant, therefore, an inherent link to the document wherein the user is able to reach the relevant document, by the systems provided information;

processing a natural language user query at a user device, including generating a problem statement in the form A-O, S-A, S-X-O or S from the natural language user query (C.5 line 60-C.6 line 22-his user input and generation of s-a-o query structure based on his search of candidate documents), where S, A and O are query elements in the natural language query and X indicates absence of a query element (ibid), converting the problem statement into a URL query (C.6 lines 22-26-his conversion of the query, and sending of the query to search the web, wherein, there is an inherent URL query generated necessary to search the web documents), and sending the URL query to a semantic server having access to the knowledge base (ibid, C.6 lines 23-44-wherein the problem statements as a URL query contain the S, A, O of the query elements from the natural language query and must search the knowledge base of S-A-O).

generating a knowledge base query from the URL query at the semantic server and searching the knowledge base for one or more S-A-O solutions associated with the problem statement (C.6 lines 23-45-his web

created knowledge base of S-A-O, being queried from the generated user request directed to the web), and if the one or more S-A-O solutions are found , converting the one or more S-A-O solutions into at least one HTML page and sending the at least one HTML page to the user device (C.6 lines 40-51-his display of the reference document to the user as being transmitted by the Web, which communicates in HTML); and

processing the at least one HTML page at the user device to output the one or more S-A-O solutions to the user query (C.6 lines 40-51-his display of the reference document containing the S-A-O solutions to the user, the document being obtained from the Web, and presented to the user).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Boris Katz, Annotating the World Wide Web using Natural Language, In Proceedings of the 5th RIAO Conference on Computer Assisted Information Searching on the Internet, 1997, teaches a ternary (S-A-O) index generation, for answering questions.

- Newman (US 5,774,833) teaches semantic analysis of text.
- Troyanova et al. (US 7,120,574) teaches S-A-O generation, synonym extension and validation.
- Miller et al. (US 6,393,428) teaches an answering system identifying subject, verb and object.
- Hatton (US 6,269,356) teaches generating subject, action and object database for answer generation.
- Verbitsky et al. (US 2001/0039490) teaches generation of subject, action, object and comparing between entities.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAMONT M. SPOONER whose telephone number is (571)272-7613. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571/272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R Hudspeth/
Supervisory Patent Examiner, Art Unit 2626

lms
8/27/09